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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,437	11/08/2001	Anthony D. Kulfan	1703A1	7096

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PPG INDUSTRIES, INC.
Intellectual Property Department
One PPG Place
Pittsburgh, PA 15272

EXAMINER

MAYEKAR, KISHOR

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 05/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/010,437	Applicant(s) KULFAN ET AL.	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-118 is/are pending in the application.
4a) Of the above claim(s) 1-22 and 71-94 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 23-70 and 95-118 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/02 & 5/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22 and 73-94, drawn to a coating composition, classified in class 523, subclass 415.
 - II. Claims 23-70 and 95-118, drawn to a coating process, classified in class 204, subclass 484.
 - III. Claim 71, drawn to a coating composition, classified in class 523, subclass 415.
 - IV. Claim 72, drawn to a coating process, classified in class 204, subclass 471+.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups II and I are related as product and process of use.

The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with

another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a non-electrocoating process.

3. Inventions of Groups III and IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a non-electrocoating process.

4. Inventions of Groups I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects: one with a curing agent containing cationic groups and the other with aliphatic polyisocyanate curing agent.

5. Inventions of Groups II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions have different effects: one with a curing agent containing cationic groups and the other with aliphatic polyisocyanate curing agent.

6. Because these inventions are distinct for the reasons given above and the search required for Group II is not required for either of Groups I, III or IV, restriction for examination purposes as indicated is proper.

7. During a telephone conversation with Attorney D. Altman on April 21, 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 23-70 and 95-118. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-22 and 71-94 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 95-118 are rejected under 35 U.S.C. 103(a) as being unpatentable over KLEIN et al. (6,398,934) in view of SCHUPP et al. (5,096,555), both references cited by Applicant. KLEIN's invention is directed to a concentrate for

the preparation of cathodic electrodeposition coating composition, comprising, in combination, a binder component comprising an aqueous dispersion of a cathodically depositable binder having functional groups comprising active hydrogen that are cross-linkable using blocked polyisocyanate; and a cross-linking component of a blocked polyisocyanate. KLEIN further discloses that the binder is a cationic sulfonium salt group-containing resin (col. 2, lines 19-58) and the cross-linking component can contain the cross-linking agent in a form neutralized with acid (col. 4, lines 37-45). KLEIN also discloses in Example 3 the electrocoating process where the concentrate is diluted with water and including the curing step. The difference between KLEIN and the above claims is that KLEIN is silent in regards to the use of a cationic amine salt group as the curing agent. SCHUPP shows a cationic group-containing curing agent is neutralized and dispersed (col. 5, lines 4-6). Although KLEIN is virtually silent in regards to the use of a cationic amine salt group-containing curing agent, however, it appears that KEIN's process in view of SCHUPP leads one of ordinary skill in the art at the time the invention was made towards to the use of cationic amine salt group-containing curing agent, in absence of evidence to the contrary. The same is applied to claims 107-109 to the pendant basic amine group.

As to the subject matter of claim 101, the selection of any of known equivalent cationic resins would have been within the level of ordinary skill in the art.

As to the subject matter of claims 110, 111, 115 and 116, KLEIN discloses in col. 3, lines 55-62.

As to the subject matter of claim 117, KLEIN discloses in paragraph crossing cols. 5 and 6 that the coating layer can be deposited as an electrically conductive primer that is a primer with sufficient electrical conductivity. As such, the selection of conductive materials added to the coating composition to impart electrical conductivity to the coating layer would have been within the level of ordinary skill in the art.

11. Claims 23-28, 31-50 and 53-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over KLEIN '934 in view of SCHUPP '555 and CORRIGAN et al. (5,385,962). KLEIN as applied above further discloses in paragraph crossing cols. 5 and 6 the further steps of depositing coating layers after curing the electrodeposited coating layer. The further difference between KLEIN and the above claims is the detailing of the curing of the top coat layer. CORRIGAN,

another reference cited by Applicant, shows the above limitation (col. 9, lines 35-45). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified KLEIN's teachings as shown by CORRIGAN because this would result in curing a coating layer after applying the coating layer.

As to the subject matter of claim 24 or claims 45-50 and 53-65, CORRIGAN shows the heating of the coating layer can be done by any convenient method such as by baking in oven or with banks of infrared heat lamps. As such, since the heating with the latter would have in the atmosphere of the type recited (that is no combustion evolved), the selection of any of known of equivalent heatings would have been within the level of ordinary skill in the art.

12. Claims 29, 30, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over KLEIN '934 in view of SCHUPP '555 and/or CORRIGAN '135 as applied to claims 23-28, 31-50 and 53-65 above, and further in view of JP 2000-281943A (an English translation provided). The difference between the references as applied above and the instant claims is the provision that the curing agent comprises a partially blocked aliphatic polyisocyanate. JP '943 shows the use

of the above polyisocyanate in an electrocoating process (see claim 1 in page 3 of the translation). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as suggested by JP '943 because the use of a mixture of the of cationic binder resins would result in harmonizing the coating resistance, here the corrosion resistance and the weather resistance.

13. Claims 66, 67, 69 and 70 is rejected under 35 U.S.C. 103(a) as being unpatentable over KLEIN '934 in view of SCHUPP '555 and TAKAHASHI et al. (4,621,420). The further difference between the references as applied above and the above claim is the inclusion in the circuit of a non-ferrous anode. TAKAHASHI shows that it is known to avoid using materials which release of metal ions for the anode in an electrocoating process (see background of the invention in cols. 1 and 2). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as suggested by TAKAHASHI's teachings because this would prevent the metal ions dissolved out from the anode and get mixed into the

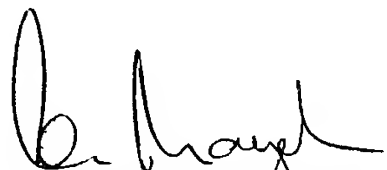
coating composition and therefore the resulting coating suffers from poor anti-corrosion property or coarse coating surface.

14. Claim 68 is rejected under 35 U.S.C. 103(a) as being unpatentable over KLEIN '934 in view of SCHUPP '555 and TAKAHASHI '420 as applied to claims 66, 67, 69 and 70 above, and further in view of CORRIGAN '962. The difference between the references as applied above and the instant claims is the heating in a specified atmosphere as claimed in claims 52 and 53. CORRIGAN shows the heating can be done by any convenient method such as by baking in oven or with banks of infrared heat lamps. As such, since the heating with the latter would have in the atmosphere of the type recited (that is no combustion evolved), the selection of any of known of equivalent heatings would have been within the level of ordinary skill in the art.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Kishor Mayekar
Primary Examiner
Art Unit 1753